

REMARKS

In the Office Action, the Examiner rejected claims 9 and 59–65 under 35 U.S.C. § 103(a) as unpatentable over Jpn. J. Appl. Phys., Vol. 31, pp. 2155–64 (1992) (“*Schadt*”) in view of U.S. Patent 5,464,669 (“*Kang*”).

Rejection under § 103(a)

To establish a *prima facie* case of obviousness under §103(a), each of three requirements must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to combine references or modify a reference. (See MPEP § 2143.) Second, a reasonable expectation of success must exist that the proposed modification will work for the intended purpose. (See *id.*) Moreover, both of these requirements must “be found in the prior art, not in applicant’s disclosure.” (*Id.*) Third, the reference or references, taken alone or in combination, must disclose or suggest every element recited in the claims. (See MPEP §2143.03.)

The Examiner correctly acknowledges that *Schadt* does not disclose or suggest “exposing the second alignment layer to UV light in oblique direction nor the pretilt angle being controlled by photo-energy.” (April 22, 2004 Office Action at 3.) The Examiner alleges, however, that *Kang* compensates in-part for this deficiency and that it would have been obvious to combine *Kang* with *Schadt* to arrive at the claimed invention. Applicants respectfully disagree.

Kang discloses a method of forming an orientation film of photopolymer in an LCD. *Kang* identified three disadvantages to a previous method of mechanical rubbing. First, mechanical rubbing produced micro grooves, which adversely affect the

operational characteristic of the display. (*Kang*, col. 1, ll. 42–46.) Second, mechanical rubbing generates static electricity, which may cause defects in an active matrix display. (*Id.*, col. 1, ll. 46–49.) Third, “it is practically impossible to locally orient selected regions of each different regions.” (*Id.*, col. 1, ll. 49–51.) *Kang* discloses a method to overcome these and other problems in the prior art. The method includes forming PCVN-F film on the surfaces of *two opposite substrates* and irradiating *both* PCVN-F films formed with linearly polarized UV lights with different energy for each film. (*Id.*, col. 2, ll. 26–31.)

As the Examiner apparently acknowledges, however, *Kang* does not disclose or suggest a combination including, “exposing said second alignment layer to light *in an oblique direction*, such that said second alignment layer has a pretilt angle and a pretilt direction associated therewith,” as recited in claim 9. Instead, the Examiner contends this is obvious in view of *Schadt*, alleging that “it is notoriously well known in the art to form pretilt angles with different directions on such alignment.” (April 22, 2004 Office Action at 3.) The Examiner provides no support for this allegation and Applicants respectfully disagree with it. Applicants request that the Examiner identify a reference supporting this allegation or provide an affidavit if it is within the Examiner’s knowledge. See M.P.E.P. § 2144.03. Thus, neither *Schadt* nor *Kang* teaches or suggests all the elements of claim 9, and there is no suggestion in the references to modify the structures disclosed therein to achieve the claimed combination.

Moreover, there is no teaching or suggestion in the references of at least a combination of “rubbing [a] first alignment layer” and “exposing [a] second alignment layer to light in an oblique direction,” as recited in claim 9. In fact, *Kang* teaches away from combining the references to achieve this claimed combination. *Kang* purports to

solve the problems caused by rubbing by irradiating two PCVN-F films formed with linearly polarized UV lights. On the other hand, *Schadt* is directed to rubbing, exactly what *Kang* purports to eliminate. Thus, one of ordinary skill in the art is motivated *not* to combine the references.

Because the references alone or in combination fail to present a prima facie basis for rejecting claim 9 under § 103(a), Applicants kindly request withdrawal of its rejection and its timely allowance. Applicants also request the allowance of claims 59–65 which are likewise allowable, at least because of their dependence from allowable claim 9.

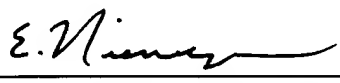
Applicants further submit that new claim 66 is allowable at least because of its dependence from allowable claim 9.

Please grant any extensions of time required to enter this response and charge any additional required fees to our deposit account 06-0916.

Respectfully submitted,

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